

Page 107, line 1, please delete the Sequence Listing of record and insert therefor the attached substitute Sequence Listing, and renumber the pages thereafter accordingly.

IN THE CLAIMS:

Please cancel claims 1-5 and 13-40 without prejudice.

6. (Amended) [A] An isolated nucleic acid molecule encoding a protein which comprises a SOCS box, [according to any one of claims 1-5] wherein [the] said SOCS box comprises the amino acid sequence:

$X_1X_2X_3X_4X_5X_6X_7X_8X_9X_{10}X_{11}X_{12}X_{13}X_{14}X_{15}X_{16}[X_j]_nX_{17}X_{18}X_{19}X_{20}$

$X_{21}X_{22}X_{23}[X_j]_nX_{24}X_{25}X_{26}X_{27}X_{28}$ (SEQ ID NO: 51)

wherein: X_1 is L, I, V, M, A or P;

X_2 is any amino acid residue;

X_3 is P, T or S;

X_4 is L, I, V, M, A or P;

X_5 is any amino acid;

X_6 is any amino acid;

X_7 is L, I, V, M, A, F, Y or W;

X_8 is C, T or S;

X_9 is R, K or H;

X_{10} is any amino acid;

X_{11} is any amino acid;

X_{12} is L, I, V, M, A or P;

X_{13} is any amino acid;

X_{14} is any amino acid;

X_{15} is any amino acid;

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 X_{16} is L, I, V, M, A, P, G, C, T or S;

$[X_i]_n$ is a sequence of n amino acids wherein n is from 1 to 50 amino acids and wherein the sequence X_i may comprise the same or different amino acids selected from any amino acid residue;

X_{17} is L, I, V, M, A or P;

X_{18} is any amino acid;

X_{19} is any amino acid;

X_{20} is L, I, V, M, A or P;

X_{21} is P;

X_{22} is L, I, V, M, A, P or G;

X_{23} is P or N;

$[X_j]_n$ is a sequence of n amino acids wherein n is from [1] 0 to 50 amino acids and wherein the sequence X_j may comprise the same or different amino acids selected from any amino acid residue;

X_{24} is L, I, V, M, A or P;

X_{25} is any amino acid;

X_{26} is any amino acid;

X_{27} is Y or F; and

X_{28} is L, I, V, M, A or P;

with the proviso that said protein is not CIS.

7. (Amended) [A] The isolated nucleic acid molecule according to claim 6 or 41, wherein [the] said protein modulates signal transduction.

8. (Amended) [A] The isolated nucleic acid molecule according to claim 7 wherein the signal transduction is modulated by an effector molecule selected from a cytokine, [or] a hormone, a microbe or a microbial product, a parasite, or an antigen [or other effector molecule].

9. (Amended) [A] The isolated nucleic acid molecule according to claim 8 wherein [the] said protein modulates cytokine-mediated signal transduction.

10. (Amended) [A] The isolated nucleic acid molecule according to claim 9 wherein the signal transduction is mediated by [one or more] at least one of the cytokines EPO, TPO, G-CSF, GM-CSF, IL-3, IL-2, IL-4, IL-7, IL-13, IL-6, LIF, IL-12, IFN γ , TNF α , IL-1 [and/or] or M-CSF.

11. (Amended) [A] The isolated nucleic acid molecule according to claim [10] 9 wherein the signal transduction is mediated by [one or more] at least one of IL-6, LIF, OSM, IFN γ [and/or] or thrombopoietin.

12. (Amended) [A] The isolated nucleic acid molecule according to claim 11 wherein the signal transduction is mediated by IL-6.

Please add the following claims:

41. An isolated nucleic acid molecule encoding a protein which comprises a SOCS box, wherein said SOCS box comprises the amino acid sequence:

$X_1X_2X_3X_4X_5X_6X_7X_8X_9X_{10}X_{11}X_{12}X_{13}X_{14}X_{15}X_{16}[X_i]_nX_{17}X_{18}X_{19}X_{20}$

$X_{21}X_{22}X_{23}[X_j]_nX_{24}X_{25}X_{26}X_{27}X_{28}$ (SEQ ID NO: 51)

wherein: X_1 is L, I, V, M or P;

X_2 is any amino acid residue;

X_3 is P, T or S;

X_4 is L, I, V, M, A or P;

X_5 is any amino acid;

X_6 is any amino acid;

X_7 is L, I, V, M, A, F, Y or W;

X_8 is C, T or S;

X_9 is R, K or H;

X_{10} is any amino acid;

X_{11} is any amino acid;

X_{12} is L, I, V, M, A or P;

X_{13} is any amino acid;

X_{14} is any amino acid;

X_{15} is any amino acid;

X_{16} is L, I, V, M, A, P, G, C, T or S;

$[X_i]_n$ is a sequence of n amino acids wherein

n is from 1 to 50 amino acids and wherein the

sequence X_i may comprise the same or

different amino acids selected from any amino acid residue;

X₁₇ is L, I, V, M, A or P;

X₁₈ is any amino acid;

X₁₉ is any amino acid;

X₂₀ is L, I, V, M, A or P;

X₂₁ is P;

X₂₂ is L, I, V, M, A, P or G;

X₂₃ is P or N;

[X_j]_n is a sequence of n amino acids wherein n is from 0 to 50 amino acids and wherein the sequence X_j may comprise the same or different amino acids selected from any amino acid residue;

X₂₄ is L, I, V, M, A or P;

X₂₅ is any amino acid;

X₂₆ is any amino acid;

X₂₇ is Y or F; and

X₂₈ is L, I, V, M, A or P.

42. The isolated nucleic acid molecule of claim 6 or 41, wherein said SOCS box comprises a sequence selected from any one of SEQ ID NOs: 52-68.

43. The isolated nucleic acid molecule of claim 6 or 41, wherein said SOCS box comprises a sequence having at least about 70% similarity to any one of SEQ ID NOs: 52-68.

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44. The isolated nucleic acid molecule according to any one of claims 6 or 41, wherein said protein further comprises a domain in a region N-terminal of said SOCS box, wherein said domain is an SH2 domain, a domain comprising WD-40 repeats, or a domain comprising ankyrin repeats.

45. An isolated nucleic acid molecule encoding a protein comprising an amino acid sequence having at least about 50% similarity to any one of SEQ ID NOS: 4, 6, 8, 10, 12, 14, 18, 21, 25, 29, 36, 41, 44, 46 or 48.

46. The isolated nucleic acid molecule of claim 45, wherein said protein comprises an amino acid sequence selected from SEQ ID NOS: 4, 6, 8, 10, 12, 14, 18, 21, 25, 29, 36, 41, 44, 46 or 48.

47. An isolated nucleic acid molecule having at least about 50% similarity to any one of SEQ ID NOS: 3, 5, 7, 9, 11, 13, 15, 16, 17, 20, 22-24, 26-28, 30-35, 37-40, 42-43, 45 or 47.

48. An isolated nucleic acid molecule which hybridizes under low stringency conditions to any one of SEQ ID NOS: 3, 5, 7, 9, 11, 13, 15, 16, 17, 20, 22-24, 26-28, 30-35, 37-40, 42-43, 45 or 47, wherein said low stringency conditions comprise at least about 1% v/v to at least about 15% v/v formamide at least about 1M to about 2M salt for hybridization at 42°C, and at least about 1M to about 2M salt for washing.

49. The isolated nucleic acid molecule of claim 47 or 48, wherein said nucleic acid molecule comprises a sequence